

**Notice of Allowability****Application No.**

09/888,340

**Examiner**

FREDA A. NELSON

**Applicant(s)**

NEAL ET AL.

**Art Unit**

3628

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERIT IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 3/26/09 and telephonic interview of 6/12/09.
2. ☒ The allowed claim(s) is/are 1,10,11,19 and 21-32.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of the:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  
**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 6/12/09 and 6/14/09.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### **DETAILED ACTION**

The amendment received on march 26, 2009 is acknowledged and entered. Claims 1, 11, and 15 have been amended. Claim 20 has been canceled. No claims have been added. Claims 2-9 and 12-18 have been withdrawn. Claims 1, 11, 19, and 21-32 are currently pending due to the Examiner's amendment cancelling claims 2-9 and 12-18.

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 25, 2009 has been entered.

### ***Drawings***

The drawings filed on June 26, 2001 are accepted by the Examiner.

### ***Claim Rejections - 35 USC § 101***

The claim rejections under 35 USC 101 have been withdrawn due to Applicant's and/or the Examiner's amendment.

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kang S. Lim (Reg. No. 37,491) on June 12, 2009 and June 14, 2009.

The application has been amended as follows:

### ***ABSTRACT***

A price optimization system computes a preferred set of prices for a plurality of products. The optimization system stores a plurality of rules. The system may also prioritize the plurality of rules, and further relax lower priority rules to allow higher priority rules to become feasible. The feasible set of rules may then be utilized to generate the preferred set of prices.

### ***IN THE CLAIMS***

Claims 2-9 (Canceled)

11. (Currently Amended) A method for computing a preferred set of prices for a plurality of products, comprising generating a preferred set of prices in a computer

system, comprising, the computer-implemented steps of:

storing a plurality of rules, wherein each rule includes constraints;

prioritizing the plurality of rules;

identifying an infeasible rule of the plurality of rules, wherein the infeasible rule is not able to be satisfied;

identifying at least one lower priority rule which has a lower priority than the infeasible rule, wherein the at least one lower priority rule conflicts with the infeasible rule;

incrementally relaxing the at least one lower priority rule to enable the infeasible rules to become feasible, wherein the incremental relaxing of the at least one lower priority rule includes broadening the constraints of the said at least one lower priority rule such that the conflict between the at least one lower priority rule and the infeasible rule is eliminated;

performing an optimization process, utilizing Bayesian shrinkage modeling, to generate the preferred set of prices wherein the preferred set of prices meets the plurality of rules wherein a rule is feasible if said optimization process can be performed without violating said rule, further wherein the preferred set of prices is a set of product prices generated for said plurality of products; and

setting prices for the plurality of products to the preferred set of prices, wherein the setting prices for the plurality of products includes displaying the preferred set of prices on a display on a computer system.

Claims 12-18 (Canceled)

***Allowable Subject Matter***

Claims 1, 11, 19, and 21-32 are allowed.

The following is an examiner's statement of reasons for allowance:

1. As per independent claims 1 and 11, the best prior art, Eder, (US Patent Number 5,615,109), while disclosing a method of and system for generating feasible profit maximizing requisition sets, in view of (Ouimet et al. (US Patent Number 6,094,641), while disclosing a method for incorporating psychological effects into demand models, further in view of Herz et al. (US PG Pub. 2001/0014868), while disclosing a system for automatic determination of customized prices and promotions and still further in view of Ouimet et al. (US Patent Number 6,308,162), while disclosing a method for controlled optimization of enterprise planning models does not disclose or fairly teach:

identifying an infeasible rule of the plurality of rules, wherein the infeasible rule is not able to be satisfied;

identifying at least one lower priority rule which has a lower priority than the infeasible rule, wherein the at least one lower priority rule conflicts with the infeasible rule;

incrementally relaxing the at least one lower priority rule to enable the infeasible rules to become feasible, wherein the incremental relaxing of the at least one lower priority rule includes broadening the constraints of the said at least one lower priority rule such that the conflict between the at least one lower priority rule and the infeasible

rule is eliminated;

performing an optimization process, utilizing Bayesian shrinkage modeling, to generate the preferred set of prices wherein the preferred set of prices meets the plurality of rules wherein a rule is feasible if said optimization process can be performed without violating said rule, further wherein the preferred set of prices is a set of product prices generated for said plurality of products.

2. The best NPL prior art, "Dembeck et al., "Using a Spreadsheet to Solve a Multinational Marketing Problem", does not disclose or fairly teach:

identifying an infeasible rule of the plurality of rules, wherein the infeasible rule is not able to be satisfied;

identifying at least one lower priority rule which has a lower priority than the infeasible rule, wherein the at least one lower priority rule conflicts with the infeasible rule;

incrementally relaxing the at least one lower priority rule to enable the infeasible rules to become feasible, wherein the incremental relaxing of the at least one lower priority rule includes broadening the constraints of the said at least one lower priority rule such that the conflict between the at least one lower priority rule and the infeasible rule is eliminated;

performing an optimization process, utilizing Bayesian shrinkage modeling, to generate the preferred set of prices wherein the preferred set of prices meets the plurality of rules wherein a rule is feasible if said optimization process can be performed

without violating said rule, further wherein the preferred set of prices is a set of product prices generated for said plurality of products.

3. The best foreign art, Ashkenazi (WO 02/01456 A1), while disclosing an e-commerce real time demand and pricing system and method, fails to disclose:

identifying an infeasible rule of the plurality of rules, wherein the infeasible rule is not able to be satisfied;

identifying at least one lower priority rule which has a lower priority than the infeasible rule, wherein the at least one lower priority rule conflicts with the infeasible rule;

incrementally relaxing the at least one lower priority rule to enable the infeasible rules to become feasible, wherein the incremental relaxing of the at least one lower priority rule includes broadening the constraints of the said at least one lower priority rule such that the conflict between the at least one lower priority rule and the infeasible rule is eliminated;

performing an optimization process, utilizing Bayesian shrinkage modeling, to generate the preferred set of prices wherein the preferred set of prices meets the plurality of rules wherein a rule is feasible if said optimization process can be performed without violating said rule, further wherein the preferred set of prices is a set of product prices generated for said plurality of products.

4. The remaining dependent claims are considered allowable, as they are dependent and based off of an allowable independent claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freda A. Nelson whose telephone number is (571) 272-7076. The examiner can normally be reached on Monday - Friday, 10:00 am –6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on 571-272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.



Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Freda A Nelson/

Examiner, Art Unit 3628

/JOHN W HAYES/

Supervisory Patent Examiner, Art Unit 3628